

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A system for providing differentiated classes of storage, comprising
a storage device having a plurality of storage locations and a logical block name space for organizing logical block names of the storage locations,
a performance process for determining a level of performance for the plurality of storage locations and partitioning the plurality of storage locations into a plurality of regions ~~[[providing]]~~ as determined by their different levels of performance, ~~[[and]]~~
a mapping process for mapping the partitioned ~~[[portions]]~~ regions of the storage locations and aggregating the logical block names of the storage location in the partitioned regions having an identical level of performance to a selected section of the logical block name space.
2. (Currently amended) A system according to claim 1, wherein:
the performance process separates the plurality of storage locations into a plurality of categories as determined by their ~~being associated with a~~ different ~~[[level]]~~ levels of performance service.
3. (Currently amended) A system according to claim 2, wherein ~~[[:]]~~ the different levels of performance represent ~~the performance process separates the plurality of storage locations into a plurality of categories being associated with a~~ different RAID ~~[[level]]~~ levels of performance.
4. (Currently amended) A system according to claim 1, wherein the aggregated logical block names correspond to a common ~~mapping process associates different portions of the logical block name space to different respective levels of RAID~~ level.

Claims 5-7. (Canceled)

8. (Original) A system according to claim 1, further comprising:
a process for employing the storage to provide a file system service.

9. (Original) A system according to claim 1, further comprising:
a process for providing a storage volume service.
10. (Currently amended) A system according to claim ~~[[1]]~~ 9, wherein
the mapping process creates multiple storage volumes at a selected level of performance.
11. (Currently amended) A process for providing differentiated classes of storage,
comprising the steps of
providing a storage device having a plurality of storage locations and a logical block name
space for organizing logical block names of the storage locations,
determining a level of performance for the plurality of storage locations,
partitioning the plurality of storage locations into a plurality of regions ~~[[providing]]~~ as
determined by their different levels of performance, ~~[[and]]~~
mapping the partitioned ~~[[portions]]~~ regions of the storage locations, and
aggregating the logical block names of the storage location in the partitioned regions
having an identical level of performance to a selected section of the logical block name space.
12. (Currently amended) A process according to claim 11, further including the step of
separating the plurality of storage locations into a plurality of categories as determined by
their being associated with a different ~~[[level]]~~ levels of performance service.
13. (Currently amended) A process according to claim ~~[[11]]~~, ~~further including the step of~~
~~separating the plurality of storage locations into a plurality of categories being associated~~
~~with a~~ wherein the different levels of performance represent different RAID ~~[[level]]~~ levels
of performance.

14. (Currently amended) A process according to claim 11, wherein the aggregated logical block names correspond to a common ~~mapping process associates different portions of the logical block name space to different respective levels of RAID level.~~

Claims 15-17. (Canceled)

18. (Original) A process according to claim 11, wherein mapping creates multiple storage volumes at a selected level of performance.

19. (Currently amended) A system for providing differentiated classes of storage, comprising

a storage device having a plurality of storage locations, a logical block name space for organizing logical block names of the storage locations, and performance parameters of the storage locations that vary across the storage device, and

a partitioning process for partitioning [[those] the storage locations into regions and aggregating the logical block names of the storage locations in the partitioned regions having an identical level of performance to a selected section of the logical block name space as-a ~~function variations in performance parameters.~~

20. (Currently amended) A system according to claim 19, wherein the partitioning process selects ~~selected~~ a fixed set of partitions as a function of a selected configuration of system components.

21. (Canceled)

Add new claims 22 - 31:

22. (New) The system of claim 1, wherein a level of performance includes a data access time, or a reliability of a storage location, or a combination thereof.

23. (New) The system of claim 1, wherein the storage device is a single storage disk.
24. (New) The system of claim 1, wherein the mapping process performs mapping and aggregating when the storage system is designed.
25. (New) The system of claim 1, wherein the mapping process performs mapping and aggregating during operation of the storage device.
26. (New) The system of claim 1, further comprising a performance measurement system for scanning storage locations of the storage device and determine the level of performance for the storage locations.
27. (New) The system of claim 26, wherein the performance measurement system performs experimental read and write operations and determines the level of performance from experimental data collected in the read and write operations.
28. (New) The process of claim 11, wherein a performance level includes a data access time, or a reliability of a storage location, or a combination thereof.
29. (New) The process of claim 11, wherein partitioning comprises performing experimental read and write operations and determining the level of performance from experimental data collected in the read and write operations.
30. (New) The process of claim 11, wherein mapping and aggregating are performed when the storage system is designed.
31. (New) The process of claim 11, wherein mapping and aggregating are performed during operation of the storage system.